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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/606,808	06/28/2000	James R. Larkins	DEKA:264	6461

7590 06/20/2002
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EXAMINER

MEHTA, ASHWIN D

ART UNIT PAPER NUMBER

1638

DATE MAILED: 06/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/606,808

Applicant(s)

LARKINS ET AL.

Examiner

Ashwin Mehta

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8, 10, 11, 13-18 and 29-36 is/are allowed.
- 6) ☒ Claim(s) 9, 12, 19-28 and 37-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Status of the Application

1. Examination of this application has been transferred to Examiner Ashwin Mehta. The art unit, 1638, remains the same.
2. The rejections of claims 1-39 under 35 U.S.C. 112, 1st and 2nd paragraphs in the Office action mailed 02 October 2001 have been withdrawn, in light of the claim amendments.

Claim Objections

3. Claim 24 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form.

Claim 24 attempts to limit the hybrid plant of claim 23 by requiring it to be an F₁ hybrid corn plant. However, the plant of claim 23 is the first generation progeny of the cross of two distinct inbred plants, and therefore is an F₁ hybrid plant. Claims 23 and 24 encompass the same plants.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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4. Claims 9, 12, 19, and 20-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 9: the recitation "factor" renders the claim indefinite. It is not clear exactly what is encompassed by the term. It is suggested that the term be replaced with --gene--.

In claim 12: the recitation "wherein the regenerable cells comprise protoplasts or callus" renders the claim indefinite. Protoplasts can be made from plant cells, but it is not accurate to say that cells comprise protoplasts. Also, callus comprise cells, but cells do not comprise callus. It is suggested that the recitation "comprise protoplasts or callus" be replaced with --are in the form of protoplasts or are comprised in callus—or --are from protoplasts or callus--.

In claim 19: the claim is improperly dependent, and it is not clear if further method steps are intended. The following amendment to claim 19 is suggested: --The process of claim 18, wherein said first parent corn plant is said inbred corn plant LIZL5 and said second parent corn plant is a distinct inbred corn plant.

In claim 20: the claim is improperly dependent on claim 19. Only steps (a) to (d) further limit the method step of "crossing." Step (e) is an additional method step.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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5. Claims 22-28 and 37-39 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims are broadly drawn towards any hybrid corn seed produced by the process of crossing the inbred corn plant LIZL5 with any second, distinct, inbred corn plant; any hybrid corn plant produced by growing said hybrid corn seed; any inbred corn plant produced by growing seed of inbred corn plant LIZL5, wherein said plant further comprises any single locus conversion, or wherein the single locus was stably inserted into the genome by transformation, or wherein the locus is any dominant or recessive allele; or any fertile transgenic maize plant produced by regenerating a transgenic plant from a cell of LIZL5 that has been contacted with any pre-selected DNA, or seed of said fertile transgenic plant, or a plant grown from said seed and which comprises said pre-selected DNA.

The specification describes the morphological and physiological characteristics, SSR profile, and isozyme profile of inbred corn plant LIZ5 (page 22, lines 2-6; Tables 1 and 2, pages 22-24; page 24, line 15 to page 25, line 18; Table 3, pages 25-27; Table 6, pages 58-60; Table 7, pages 60-61). The specification indicates that a deposit of 2500 seeds of LIZL5 has been made with the American Type Culture Collection, under the Accession No. PTA-2192, under the terms of the Budapest Treaty (amendment to page 27 of the specification, in the paper submitted 19 February 2002, pages 2-3). It is noted that all restrictions to the availability of the deposited seed will be irrevocably removed upon the granting of a patent (Exhibit 1, paper submitted 19 February 2002). The specification also describes morphological traits and an SSR profile of a

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hybrid plant, designated "7026255," produced by crossing LIZL5 with an inbred maize plant designated "16SCQ2" (page 49, lines 18-24; Table 5, pages 54-55; Table 8, pages 61-63; Table 7). The specification also compares performance data for hybrid 7026255 with other corn plants (page 52, lines 1-3, Table 4, page 53).

However, the specification does not describe any hybrid corn seeds or plants other than the plant designated 7026255. Hybrids produced by crossing LIZL5 with other plants would of course produce plants that do not express the same traits as LIZL5 or 7026255. The descriptions of LIZL5 and 7026255 do not provide any information concerning the morphological and physiological characteristics of any other plant.

The specification also does not describe LIZL5 plants that further comprise single locus conversions or transgenes. The plants may be altered from LIZL5 in any of its traits. However, the specification does not describe single locus conversions and single transgenes that have the ability to alter any given maize plant trait. For example, single locus conversions or transgenes that govern yield enhancement, waxy starch, or enhanced yield stability are not described. The transgenes, such as those that encode transcription factors, may also affect more than one trait. Descriptions of such transgenic plants are not presented. Methods of making plants comprising single locus conversions or making transgenic plants are described (page 27, line 18 to page 29, line 2, and page 64, line 7 to page 70, line 4, for example). However, the methods to make the plants do not provide a description of all the morphological and physiological traits of the plants themselves. Given the breadth of the claims encompassing all hybrid corn seeds produced by crossing LIZL5 to any other maize plant, LIZL5 plants comprising any single locus conversion or any transgene, and lack of guidance of the specification as discussed above, the specification

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fails to provide an adequate written description of the multitude of corn plants and their parts encompassed by the claims.

6. Claims 9, 12, 19-28, and 37-39 are rejected, and claims 1-8, 10, 11, 13-18, and 29-36 are allowed.

Contact Information

Any inquiry concerning this or earlier communications from the examiner should be directed to Ashwin Mehta, whose telephone number is 703-306-4540. The examiner can normally be reached on Mondays-Thursdays and alternate Fridays from 8:00 A.M to 5:30 P.M. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson, can be reached at 703-306-3218. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3014 and 703-872-9306 for regular communications and 703-872-9307 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.



A.M.
June 13, 2002

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